

A Study to Assess the Effectiveness of Awareness Program on Natural Disaster among Students of Govt. Senior Secondary School in Brahmpuri at Dehradun, Uttarakhand

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ABSTRACT

A Disaster is an event or series of events, which gives rise to casualties and damage or loss of properties, infrastructure, environment, essential services or means of livelihood on such a scale which is beyond the normal capacity of the affected community to cope with. Disaster is also sometimes described as a “catastrophic situation in which the normal pattern of life or ecosystem has been disrupted and extra-ordinary emergency interventions are required to save and preserve lives and or the environment”. Over the past two decades, the number of recorded disasters has doubled from approximately 200 to over 400 per year. Nine out of every ten of these disasters have been climate related. Current projections regarding climate change suggest this trend is set to continue and that weather related hazard events will become more frequent and more volatile.

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INTRODUCTION

We cannot stop natural disasters but we can arm ourselves with knowledge: so many lives wouldn't have to be lost if there was enough disaster preparedness.

A disaster means, a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes or by accident or negligence which results in substantial loss of life or human suffering or damage to and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.

According to United Nations, Disaster is ‘a serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of the affected people to cope up using its own resources.’ However, many other international and local organizations have used different definitions for disasters.

Disaster strikes anytime, anywhere. It takes many forms - a hurricane, an earthquake, a tornado, a flood, a fire or a hazardous spill, an act of nature or an act of terrorism. It builds over days or weeks, or hits suddenly, without warning. Every year, millions of people across the globe face

disaster and its terrifying consequences. Be it an ‘act of God’ or ‘act of Man’, a mindboggling spectrum of disasters wreaks havoc in the Indian sub continent. Disasters are either natural, such as floods, droughts, cyclones, and earthquakes.

NEED FOR THE STUDY

When disaster strikes or conflict flares, people are sometimes forced to flee. Their vulnerability increases; their needs are great. They need help to rebuild their lives and livelihoods, recreate the social networks that help bolster their resilience and feel secure again.

In the last 17 years, India has faced more than 300 natural disasters which include drought, earthquake, epidemics, extreme temperature, floods, landslides and storms. These disasters have resulted in 76,031 deaths in this millennium. According to the International disaster Database (IDD)

Uttarakhand Floods in 2013 killed 6,054 people. Heavy rains flood and landslide damaged several houses in Henwalvally in Tehri Garhwal on Saturday.

Situation Report: Monsoon rains on 1 st July 2016, Friday triggered landslides in parts of Uttarakhand. A total of 30 have been feared dead from different areas of Uttarakhand following cloudbursts in Pithoragarh and Chamoli Districts

as reported by media. A cloudburst hit Singhali area near Pithoragarh early Friday morning, flattening homes in over seven villages and leaving many residents trapped in the debris. 18 bodies have been recovered till yesterday evening.

The cloudburst in Singhali area of Pithoragarh district early this morning brought over 100 mm rains in two hours in a region of 50 sq km, flattening homes in over seven villages, according to officials.

PROBLEM STATEMENT

"A study to assess the effectiveness of awareness program on Natural Disaster among students of Govt.Senior Secondary School in Brahmpuri at Dehradun,Uttarakhand."

OBJECTIVES OF THE STUDY

- To assess the knowledge regarding Natural Disaster among students of Govt.Senior Secondary School in Brahmpuri.
- To evaluate the effectiveness of awareness program on knowledge regarding Natural Disaster among students of Govt.Senior Secondary School in Brahmpuri.
- To compare the pre test and post test knowledge score among students regarding natural disaster among students of Govt. Senior Secondary School in Brahmpuri.
- To find the association between the Pre test knowledge scores with their selected demographic variables.

OPERATIONAL DEFINITION

EFFECTIVENESS: It refers to difference between pretest and post test knowledge score of students regarding natural disaster preparedness as revealed by statistical test.

AWARENESS: It is the ability to directly know and perceive, to feel or to be cognizant of Natural Disaster.

PROGRAMME: It refers to the awareness programme regarding meaning, types of disaster and role of students in Natural Disaster for the duration of 60min by using lecture cum discussion for the group of 50 students of Govt.Senior Secondary School in Brahmpuri at Dehradun.

NATURALDISASTER: It is an event or fact of Natural Disaster that has unfortunate consequences.

STUDENTS: A person who are formally engaged in learning, especially one enrolled in Govt. Senior Secondary school .

HYPOTHESIS:

H1: There will be a significant difference between the pre test and post test knowledge score of the students in selected high school regarding Natural Disaster.

H2: There will be a significant association between the mean pre test score and the mean post test score on awareness among students in selected high school regarding Natural Disaster.

METHODOLOGY

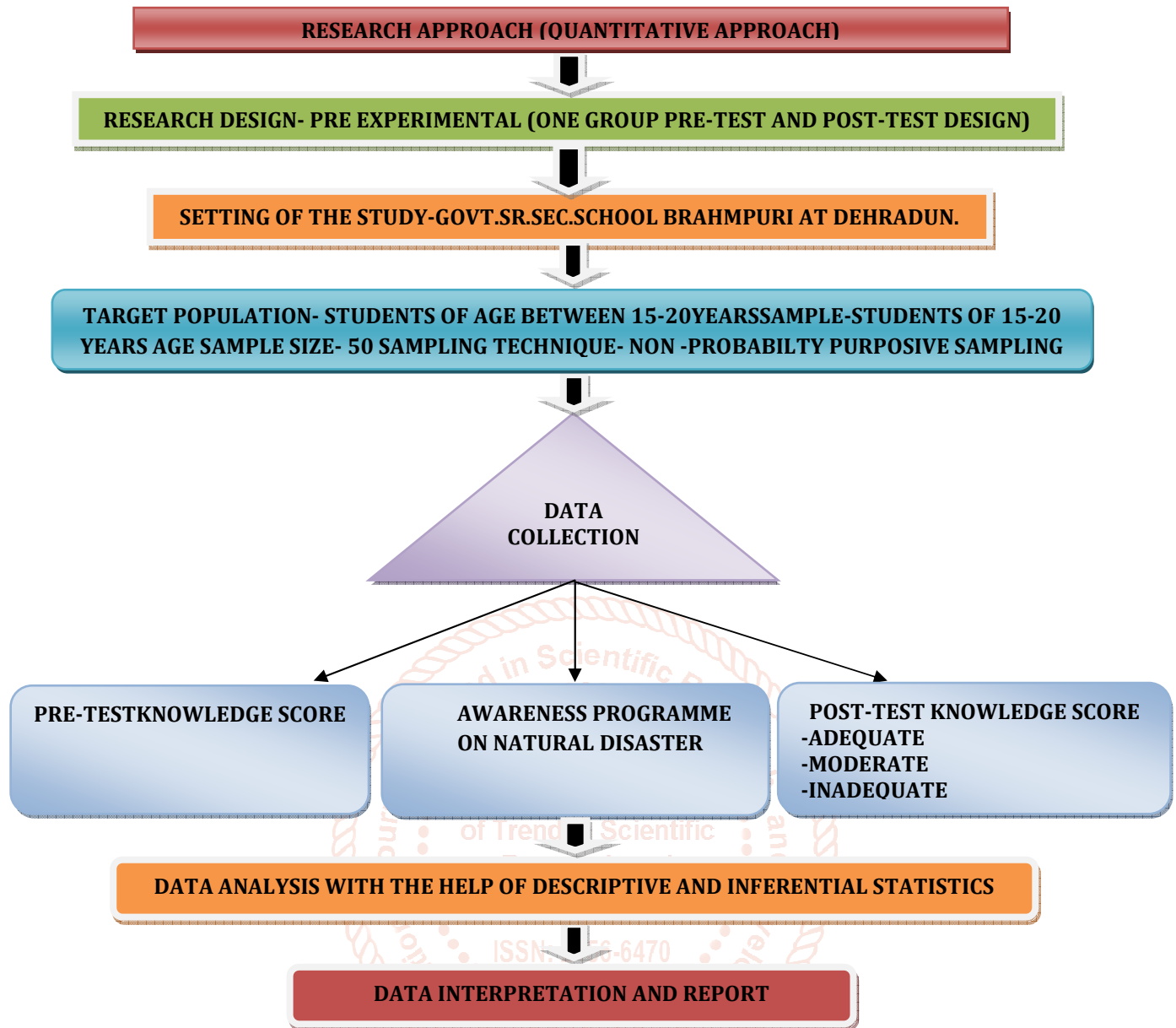
RESEARCH APPROACH

Research approach is a plan and procedure that consists of steps of broad assumptions to detailed method of data collection, analysis and interpretation. This section deals with Research approach, Research design, Variables, Setting of the study, Population, Sample, Sample size, Sampling technique, Sampling criteria, Data collection instrument, Description of tool, Development of tool, Content validity of research instrument, Pilot study, Reliability of tool, Data collection procedures, Ethical consideration, Plan for data analysis. Research methodology is a way to systematically solve research problem. Research methodology include

RESEARCH DESIGN

"A blueprint for conducting a study with maximum control over factors that may interfere with the validity of findings."

BURNS AND GROVE, 2003



POPULATION:

Population is a group whose member possesses specific attributes that a researcher is interested in the study.

TALBOT, 1994

In the present study, the population was group of students of Govt. Senior Secondary School 15-20 years.

SAMPLE:

A sample consists of the subject of the population selected to participate in research study.

BURNS N, 1999

In the present study the sample comprised of 15-20 years of students and who are fulfilling the criteria in Govt. Senior Secondary School in Brahmpuri at Dehradun.

SAMPLE SIZE:

In this study, the sample size was 50 students of 15-20 years Govt. Senior Secondary School in Brahmpuri at Dehradun.

SAMPLING TECHNIQUE:

Sampling technique refers to the process of selecting the portion of population to represent the entire population.

POLIT AND HUNGLER, 1999

Non- probability purposive sampling technique was used to select 50 students.

the validity of findings.” **BURNS AND GROVE, 2003**

SAMPLING CRITERIA

Inclusion criteria: Students who are-

1. Willing to participate in the study.
2. Available at the time of data collection.

3. Those who know Hindi.
4. Those who were studying in Govt. Senior Secondary School in Brahmpuri at Dehradun.

Exclusion criteria: Students who are-

1. Not willing to participate in the study.
2. Not available at the time of data collection.

DESCRIPTION OF TOOL

Section A: Demographic Data

It contains 9 items for obtaining information regarding Age, Sex, Class, Father Occupation, Father income, Father Educational status, Type of family, Religion, and Source of information.

Section B: Awareness questionnaire

This section consists of awareness questionnaire to assess the level of knowledge regarding Natural Disaster among the students of Govt.Senior Secondary School in Brahmpuri at Dehradun.

The total number of questions was 45.

Scoring procedure

For the convenience, the level of knowledge of students regarding natural disaster was divided into Adequate, Moderate and Inadequate.

Maximum score: 45

Minimum score: 0

Level of knowledge	Range	Percentage
Inadequate	0-15	33.3
Moderate	16-30	66.3
Adequate	30-45	99.3
Total	45	100%

Criterion measure

All the items of the tool were analyzed by using Descriptive statistics (frequency distribution, percentage distribution and graphs) and Inferential statistics (chi-square)

CONTENT VALIDITY OF RESEARCH INSTRUMENT

Validity refers to a complex concept which broadly concerns the soundness of the studies evidence that is whether the findings are convincing and well ground.

Content validity was done from five experts (Departments like Community Health Nursing, Community Medicine) and necessary corrections were made in the tool based on the suggestions obtained. Awareness questionnaire was translated into Hindi language expert for the use of data collection.

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RELIABILITY OF THE TOOL

Reliability of the tool is the degree of consistency with which measures the attributes it is suppose to measure. It refers to the extent to which the same result is obtained repeated administration of instrument. The tool was administered on ten subjects and the reliability of the tool was found by using Karl Pearson's co-relation method. The reliability of the structured questionnaire was found 0.78.. Hence the tool was found to be reliable.

DATA COLLECTION PROCEDURE

The period of data collection was extended from 18-04-2017 to 16-05-2017. The study was conducted in Govt.Senior Secondary School in Brahmpuri at Dehradun. It is situated at a distance of three k.m from the college. Researcher selected the area for the easy availability of the samples. It is a rural area and takes fifteen minute to reach over Govt.Senior Secondary School in Brahmpuri at Dehradun. The purpose and nature of the study was explained to the subjects and their consent was obtained. The subjects were approached at Govt.Senior Secondary School in Brahmpuri at Dehradun. The pretest was conducted on the students and awareness program on the same day. On the twenty eighth day post test was conducted on the same subjects to assess the knowledge.

ANALYSIS AND INTERPRETATION OF DATA

Organization of finding

The data analysis were presented under the following headings:-

Section 1: Description of sample characteristics.

Section 2: Effectiveness of awareness program on natural disaster.

Section 3: Effectiveness of awareness program by comparing pre test and post test level of knowledge score regarding natural disaster among students.

Section 4: Association between pre-test scores with their selected demographic variables. **Section 1: Description of sample characteristics**

The subjects were selected through purposive sampling technique from Govt. Senior Secondary School in Brahmpuri at Dehradun”

The data obtained in sample characteristics and analyzed using descriptive statistics and depicted in Table (1).

TABLE 1: Frequency and percentage distribution of sample according to their selected demographic variables

N = 50

S. NO.	DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
1.	AGE (IN YEARS)		
	a) 15-16	30	60
	b) 17-18	20	40
	c) 19-20	0	0
2.	SEX		
	a. Male	15	30
	b. Female	35	70
3.	CLASS		
	a. 11 th	31	62
	b. 12 th	19	38
4.	TYPE OF FAMILY		
	a. Joint	22	44
	b. Nuclear	28	56
	c. Extended	0	0
5.	RELIGION		
	a. Hindu	24	48
	b. Muslim	24	48
	c. Christian	0	0
	d. Sikh	2	4
	e. Other	0	0
6.	FATHER EDUCATION		
	a. No formal education	14	28
	b. Primary education	18	36
	c. Secondary education	13	26
	d. Higher secondary	4	8
	e. Graduation and above	1	2
7.	OCCUPATION		
	a. Unemployed	13	26
	b. Govt. employee	3	6
	c. Private employed	27	54
	d. Retired	7	14
8.	FATHER INCOME		
	a. 1001-5000	13	26
	b. 5001-10,000	21	42
	c. 10001-15000	9	18
	d. > 15000	7	14
9.	SOURCE OF INFORMATION		
	a. Television	26	52
	b. Radio	3	6
	c. Newspaper	20	40
	d. Internet	1	2

Section 2: Effectiveness of awareness program regarding natural disaster among students.**Table (2): Frequency and percentage distribution of sample Pre-test and post-test response to awareness program.****N=50**

	ADEQUATE		MODERATE		INADEQUATE	
	FREQUENCY (f)	PERCENTAGE (%)	FREQUENCY (f)	PERCENTAGE (%)	FREQUENCY (f)	PERCENTAGE (%)
P R E T E S T	2	4%	40	80%	8	16%
P O S T T E S T	40	80%	10	20%	0	0%

Data presented in Table (2) shows that in Pre-test 4% of subjects adequate knowledge and in post test that was increased to 80%. Moderate knowledge score in pretest was 80% that was reduced to 20%. Inadequate knowledge score in pre test was 16% that was reduced to 0% in post test.

TABLE.3 shows that Mean, Standard Deviation and “t” value between the pre-test and post-test regarding awareness program.

Table.3 Revealed that the mean post-test knowledge score of students was significantly higher than the mean pre-test scores. The calculated “t” value (19.61) was more than the table value at 0.05 level of significance. Therefore, it can be said that the awareness program was found to be effective in increasing the knowledge regarding natural disaster among students.

Hence in this the hypothesis (H1) is accepted so there is significant association between pre test and post test knowledge score among students.

Section 4: Association between pre-test scores of awareness program with their selected demographic variables**Table (4): Association between pre-test knowledge score with their selected demographic variables****N=50**

S. no	Demographic variables	Frequency	DF	Chi-Square value	Table Value	Level of association
1	AGE (IN YEARS)					
	a. 15-16	30	2	0.96	5.99	#
	b. 17-18	20				
	c. 19-20	0				
2.	SEX					
	a. Male	15	2	5.78	5.99	#
	b. Female	35				
3.	CLASS					
	a. 11 th	31	2	1.4	5.99	#
	b. 12 th	19				
4.	TYPE OF FAMILY					
	a. Joint	22	2	2.254	5.99	#
	b. Nuclear	28				
	c. Extended	0				
5.	RELIGION					
	a. Hindu	24	4	13.26	9.49	*
	b. Muslim	24				
	c. Christian	0				
	d. Sikh	2				
	e. Other	0				
6.	FATHER EDUCATION					
	a. No formal education	14	8	25.11	15.51	*
	b. Primary education	18				
	c. Secondary education	13				
	d. Higher secondary	4				
	e. Graduation and above	1				

7.	FATHER OCCUPATION					
	a. Unemployed	13	6	2.73	12.59	#
	b. Govt. employee	3				
	c. Private employed	27				
	d. Retired	7				
8.	FATHER INCOME					
	a. 1001-5000	13	6	16.81	12.59	*
	b. 5001-10,000	21				
	c. 10001-15000	9				
	d. > 15000	7				
9.	SOURCE OF INFORMATION					
	a. Television	26	6	7.99	12.59	#
	b. Radio	3				
	c. Newspaper	20				
	d. Internet	1				

*Significant at $p < 0.05$ level# Not significant at $p < 0.05$

Table (4) shows that there was not significant association between pretest knowledge score and selected demographic variables (Age, Sex, Class, Type of family, Father occupation, source of information) at 0.05 level of significance. There is significant association between demographic variables (Religion, Father education, Father income) at 0.05 level of significance.

Hence the research hypothesis (H2) accepted and null hypothesis is rejected.

DISCUSSION

A report of finding is never sufficient to convey their significance. The meaning that researcher give to the result plays a rightful and important role in the report. The discussion selection is devoted to a thoughtful and insightful analysis of the finding, leading to a discussion of their clinical and theoretical utility.

This chapter deals with the discussion in accordance with the objectives of the study and hypothesis. The statement of problem was "A Study to assess the effectiveness of an awareness program on Natural disaster among students of Govt. Senior Secondary School in Brahmpuri at Dehradun".

MAJOR FINDINGS OF THE STUDY ARE AS

Objective 1:- To assess the knowledge regarding Natural Disaster among students of Govt.Senior Secondary School in Brahmpuri.

The table (1) shows that demographic data details According to their age group highest percentage of student 60% were in the age group of 15-16years. In the age group of 17-18 years of students were 40%, in the age group 19-20years it was 0%.

Percentage distribution of students in relation to their Sex shows that highest percentage of students 70% was females and 30% were males.

Finding related to supported study:

OBJECTIVE 2. To evaluate the effectiveness of awareness program on knowledge regarding natural disaster among students of Govt.Senior Secondary School in Brahmpuri.

Table (2) depict that in Pre-test 4%of subjects adequate knowledge and in post test that was increased to 80%. Moderate knowledge score in pretest was 80% that was reduced to 20%. Inadequate knowledge score in pre test was 16% that was reduced to 0% in post test.

OBJECTIVE 3.To compare the pre test and post test knowledge score with their demographic variables.

Data show in Table (3) revealed that the mean post-test knowledge score of students was significantly higher than

the mean pre-test scores. The calculated "t" value (19.61) was more than the table value at 0.05 level of significance. Therefore, it can be said that the awareness program was found to be effective in increasing the knowledge regarding Natural Disaster among students.

OBJECTIVE 4. To find the association between the Pre test knowledge scores with their selected demographic variables.

Table (4) Finding revealed that, there was not significant association between pretest knowledge score and selected demographic variables (Age, Sex, Class, Type of family, Father occupation, source of information) at 0.05 level of significance. There is significant association between demographic variables (Religion, Father Education, Father income) at 0.05 level of significance.

Hence the Research Hypothesis (H2) is accepted and Null hypothesis is rejected. The study was conducted to assess the effectiveness of an awareness program on Natural Disaster among students of Govt. Senior Secondary School in Brahmpuri at dehradun". The paired "t" test was computed between pre-test and post-test knowledge score. The value of paired "t" test for knowledge score is 19.61 with the table value 2 at 0.05 level of significance was found to be highly significant relationship between pre-test and post-test scores. So in this study it was found that awareness program is effective in improving the knowledge of students regarding Natural Disaster.

This study proved that there is significant association between knowledge scores with their selected demographic variables.

RESULTS

The study was conducted to assess the effectiveness of an awareness program on Natural Disaster among students of Govt. Senior Secondary School in Brahmpuri at dehradun". The paired "t" test was computed between pre-test and post-test knowledge score. The value of paired "t" test for knowledge score is 19.61 with the table value 2 at 0.05 level of significance was found to be highly significant relationship between pre-test and post-test scores. So in this study it was

found that awareness program is effective in improving the knowledge of students regarding Natural Disaster.

This study proved that there is significant association between knowledge scores with their selected demographic variables.

NURSING IMPLICATIONS

NURSING SERVICE:

- Nursing plays a vital role in improving the nursing care, imparting knowledge and increasing the knowledge regarding Natural Disaster..
- The present findings of the study revealed that majority of students found to improve knowledge score after the implementation of Awareness program.

NURSING EDUCATION:

- Nursing education emphasizes that health care system should pay more attention on training the students so that they themselves will gain knowledge about the management of Natural Disaster. Community health nurse should teach the students how to prepare for Natural Disaster and prevention of risk factors that lead to Natural Disaster.
- The students should be made aware of the importance of preparedness, prevention and management of Natural Disaster. The curriculum should give importance to health education.

NURSING ADMINISTRATION:

- The nurse administrators should take interest in providing information to the students regarding Natural Disaster, Types of Natural Disaster, risk factors related to Natural Disaster and about preparedness, prevention and management of Natural Disaster.
- Nurses can also co-ordinate and discuss about Natural Disaster and preparedness, prevention and management of Natural Disaster among students and can conduct meetings so that the health program could be organized at various levels thus creating awareness in order to have good outcome regarding Natural Disaster awareness.

NURSING RESEARCHER:

Currently nursing practice is based on evidenced based practice. It is important to do research to equip and expect the nurse to be independent nurse midwifery. The study will motivate the new researchers to conduct the same study with different variables and on large scale.

RECOMMENDATIONS

- A large scale study can be conducted on larger samples to generalize the findings.
- A comparative study can be conducted to assess the knowledge regarding prevalence of Natural Disaster among students.
- Study can be conducted in rural area due to lack of knowledge or economic illiteracy.
- A comparative study can be conducted among urban and rural area regarding Natural Disaster.
- An experimental study can be conducted to assess the effectiveness of Structured Teaching Program on level of knowledge regarding Natural Disaster.

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